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ABSTRACT

Case studies have emerged as a viable tool for exposing novice teachers to mundane and unique situations that might be encountered in the classroom. This paper discusses the utilization of video taped case studies as a valid method for assessing the reactions and perceptions of preservice teachers to an introductory field observation course. Students observed unrehearsed video taped segments of classroom interactions from elementary and secondary classrooms and were asked to describe significant events. In addition, they were asked to make judgments regarding the teacher's behavior and interaction with the pupils. This process is utilized not only as an instructional tool but also as a vehicle for assessing the students observational skills. Students report that assessment of their skills via the video cases provides them with a more realistic opportunity to implement the experiences, knowledge, and skills gained throughout the semester. Several distinct topics emerged as this project was developed and include: content of the video segments, the process of taking a video examination, technical aspects of technology and their effects on learning, evaluation and financial and collegial support. (Author/LL)

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Student Reactions to Using Video Cases for Evaluation of Early Field Experiences

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Abstract

Case studies have emerged as a viable tool for exposing novice teachers to mundane and unique situations that they might encounter in the classroom. The article discusses the utilization of case studies in the evaluation of preservice teachers in an introductory field experience. Preservice teachers observe unrehearsed video taped segments from elementary and secondary classrooms and are asked to describe significant events. In addition, they are asked to make judgments regarding the teacher's behavior and interaction with the pupils. This process is utilized not only as an instructional tool but also as a vehicle for assessing the students' observational skills. Students report that assessment of their skills via the video cases provides them with a more realistic opportunity to implement the experiences, knowledge, and skills gained throughout the semester.

Student Reactions to Using Video Cases for Evaluation of Early Field Experiences

Introduction

Early field experiences have become common in most teacher preparation programs. Much effort has gone into the development of objectives and curricular activities for these experiences. The focus of this article is on a method of assessment using video technology that is congruent with early field experience objectives.

Opinions differ about the use of technology in educational settings. Jackson (1990) has described this technology as the acquisition of new tools that have no specific objective beyond their presence. On the other hand, Solomon (1992, p. 329) asserts we must have "preservice and inservice training courses that include technology in all curricular areas instead of separating into something independent of normal classroom activities".

We agree with Solomon's position. Objectives for the use of technology in teacher education can and should be related to learning objectives for the preservice early field experience program. Video technology has been used in our experiment both as a means to instruct throughout the course and to assess observational skills and pedagogical knowledge at the end of the course. Student reactions to this video case format for developing classroom observation skills have been recorded over five semesters. The focus of this article is the reactions and perceptions of students to the use of video cases of classroom interactions as a valid method for assessing the course objectives.

Rational and Related Research

Traditionally, early field experiences and student teaching have been accepted as the way students gain conditional or event-structured knowledge. Research suggests, however, that the very complexity of classrooms can limit the acquisition of such knowledge; it may be damaging and may support negative preconceptions about the field experience (Doyle, 1977; Buchmann & Schwille, 1983; Richardson-Koehler, 1987). Rather than forego field experiences, teacher educators have developed procedures to better prepare students for these experiences by providing training and practice in observational skills, microteaching in a controlled setting, and laboratory experiences. However, many of the negative aspects of field observations remain.

The use of the case materials and case studies has been introduced as a strategy to overcome some of the negative components of field experiences. One type of case is the more familiar written narrative of classroom interactions and the other is a noncontrived, unrehearsed live action video tape of classroom interactions.

In their review of technology in teacher education, Brooks and Kopp (1990, p. 500) suggested an interactive videodisc program that would counter negative aspects of field observations, particularly "untrained eyes and selective memories" that permit novices "to see what they want to see". They hypothesized that video protocols of critical classroom events would help preservice teachers begin to anticipate the range of problems and constraints that occur daily in classrooms. Using an interactive videodisc program, a novice could analyze (on campus) a typical classroom but have the advantages of "rewind, pause, volume control, laser pointer, instructors' insight and group discussion" (p. 502). This system would

permit preservice students to enter data, make and compare decisions without the constraints usually found during field experiences, and begin to develop event-structured knowledge.

In addition, other researchers (Carter, 1988, Shulman, 1991) believe the written case-based method of teaching holds promise. This method provides preservice students with an approach to studying the complexities of teaching by incorporating not only declarative and procedural knowledge (the what and how of teaching and learning), but also contextual (event-structured) knowledge. The best written cases embed narratives in an event or series of events and provide insight into the critical and emotional responses of the teacher. Furthermore, some written cases (e.g., Shulman, 1991) offer at least two commentaries by educators (new and experienced teachers, administrators, teacher educators, or scholars) who represent different points of view in hopes of aiding reflective decision making rather than reactive decision making. What remained unclear in both the video and written case designs was the method of evaluation or assessment of professional growth.

Authentic evaluation or assessment of professional growth in both early field experiences and student teaching presents a number of difficulties. Authentic assessment targets lifelike performance tasks in meeting the course objectives. For example, preservice students have been asked to write their own cases for evaluation; in other instances, they have been asked to evaluate or design solutions to cases presented to them. Kagan and Tippins' (1991, p. 288) research indicates there is a strong relationship between professional developmental level and experience observable in the responses to such tasks. Writing solutions to cases prepared by others "elicited impersonal narratives containing

overgeneralizations and prescriptions about teaching, students, and classrooms". The recent emphasis on reflective teacher education was intended to change such responses. Other problems involve time and financial support for developing and scoring authentic assessment materials. Arguments mounted on behalf of authentic assessment techniques indicate that not only the mode of evaluation changes, but also the nature of the preparation leading to evaluation. For example, often cited is the change in writing instruction as a result of using constructed responses in evaluations.

A History Lesson

In the fall semester of 1990, stimulated by student complaints and poor responses to the written events included on the final examination for the introductory early field experience course, a video tape of classroom events which occurred during the presentation of a lesson was substituted for the written examination. On the examination, students were asked to engage in a written exercise based on the kinds of activities they had been expected to engage in during the course. The major activities of the course were centered around 36 clock hours of observation of pupil-teacher interactions in a school classroom, analysis of the teaching and learning contexts within this classroom, and examination of their own actions and reactions to events they witnessed or participated in. How well had students learned to observe, describe, analyze, and state reasons for their own actions and reactions? McIntyre and Pape (1993) describe findings which indicate that students' responses became more descriptive in their analysis of critical classroom events and were able to use more evidence in supporting their claims while participating in a series of four video cases

prior to the video final examination that had been developed and added to course activities.

Creating the Video Case

Teachers and administrators were asked informally what they believed students in the teacher preparation program should know and be able to do at the end of their first semester of observation. They were also asked what kind of assessment or examination would show that the preservice teachers had indeed obtained such knowledge and skills. Generally, suggestions from the teachers and administrators focused on the body of knowledge and skills they wanted students in teacher preparation to obtain, but not on the form of assessment or evaluation which would provide evidence of such growth.

Because research strongly suggests that worthy assessments should closely match the kinds of activities students participate in, a video case (rather than written case) was developed from a video tape of a morning's activities in an elementary classroom. The tape was an unrehearsed typical morning of events, lessons, and pupil-teacher interactions in a first grade classroom. The taping was done from the front and side of the room, focusing more on the pupils than the teacher. Following taping, the teacher reviewed the tape and indicated which events she felt were important and why they were important. Editing, based on the teacher's direction, reduced the length of the video tape while keeping the focus on significant events. The final edited version was copied three times to one video tape to enable students to view the video repeatedly without using time for rewinding during testing.

The students viewed the video taped classroom and commented on their observations using the course concepts as a base for knowing what to

observe and what to comment about. Questions provided during the video examination to precipitate thinking and writing about concepts from the course were much like those used for guiding field observations. The questions asked students to describe and analyze a classroom event, and to then explain their analysis in terms of their personal beliefs or experiences.

For the next two semesters, students, when offered a choice, unanimously chose to take the video examination format rather than the written examination. Strong student support for developing teacher education materials using video cases was indicated by their comments. Students claimed that they had never had tests like the video final. Carrie noted:

> I would have liked to have had a paper and pencil test, but I can see that for this class on observing, the video tape was the most appropriate test for it. Basically we've been learning how to observe, look at a classroom, see what is happening there, and analyze it. In order to have a test that's more appropriate for what we were doing you have to be put in the same situation and have to analyze it on a video. I'd rather have had paper-pencil tests mainly because that's what I'm used to. That's what I've had for so many years and when all of a sudden somebody does something different you don't feel so comfortable with it. But I could see where this is the most appropriate thing to have.

What We Are Learning

Student attitudes toward the use of video cases as an assessment tool were collected in exit interviews at the end of the course. Students were interviewed using a semi-structured interview by a faculty member not

involved in the course. The interviews were audio- or videotape recorded and transcribed.

The first semester of the video case final examination highlighted several difficulties; some of these were corrected immediately and some are still being refined. Several distinct areas have emerged as this project has developed: content of the video segments, the process of taking a video examination, technical aspects of technology and their effects on learning, evaluation, and financial and collegial support.

Content

Several interesting comments focused on the grade level or the content of the classroom in the video case final. Students wanted to view a classroom featuring the grade level they had observed. Those specializing in working with handicapped pupils, such as speech pathologists or special education majors, wanted content in their specialty areas. One speech pathology student, Jason, commented:

> They didn't really seem to apply to me because a lot of the stuff they talked about had to do with a big classroom and everything and I'm not in that situation at all. Like a lot of things they talked about we just never see. They talked about big behavior problems and big disturbances and with only two or three kids there really isn't even a big behavior problem in a therapy session.

Nonetheless, most students believed the video final evaluated their knowledge more adequately than a paper and pencil kind of assessment. Despite these grade level and content disadvantages, the students were very positive about the increased value they saw in testing which was congruent with their classroom experiences.

Brittany explained:

> The final was and wasn't effective in assessing our knowledge because most of us in this class have been in an elementary education environment. The tape we were looking at for the final was a high school art class. Something that we had not been exposed to all semester and everything. But then it made us take from our knowledge of the elementary segments we had see and draw it out and apply it to the high school situation. It was kind of hard at first, cause [sic] I was thinking, "We've not had any dealings with high school." So I made comments on the final like: "It looks like it would be a problem, but it may be appropriate for this setting." Hopefully Dr. Wright will know; well, at least it is a problem in some classrooms, but you have to weigh and measure both sides to see if it is a problem.

Jeff stated:

> I think it covered everything that was covered in the book. It had a lot of terms, a lot of all the understandings and knowledge that was in the book. Because I got more out of the course than what was in the book, what I saw in the class was more important to me that what I read. The final was just like something you saw in the classroom but it did cover all the areas that had been discussed in the class time we had.

The video case tests provided an added benefit for some students by teaching while they tested. One student indicated, "I just look at everything differently. I can see there are different ways to approach different problems." The cognitive flexibility theories of Spiro and his colleagues (Spiro, Vispoel, Schmitz, Samarapungavan & Boerger, 1987)

suggest that learners may be able to work more effectively in ill-structured domains (such as teaching) when they are provoked to tap knowledge from multiple sources in the construction and adaptation of knowledge to new situations. Focusing the video taped segments on the pupils seemed to encourage more attention to what pupils were doing and how they were reacting than might be expected based on Kagan and Tippins' (1990) research mentioned earlier. When asked whether the grade level or subject area in the video tests affected their performance, Mary Jean reflected:

> To some extent [they did]. It just depended on what we were looking for. Just for watching how a teacher taught, or different methods she used, it could be for any grade level. But I thought that watching high school and a grade school would be better for us than to just keep watching grade school. I think that using both levels would help us just look for the students and what the students will do. And the different strategies a teacher has to use to motivate the students. So I think its important for us to see both elementary and secondary classes.

Using the video final rather than the traditional paper and pencil examination requires an instructor to develop a different scheme for marking the responses written by students. The instructor must be familiar not only with the content of the video, but must also be prepared to consider more than one way of seeing and interpreting events. A serious difficulty seems to be the lack of one right answer. Some students saw this lack of one right answer as an "anything goes" situation. Others were challenged to consider multiple responses, while some indicated that

what they found problematic in this example might not be problematic in another example.

The authenticity of the video examination in students' perceptions was represented by Kelly's comment:

> I think this final evaluates your knowledge better than a paper and pencil test because you can actually see it happening. You can write any situation but it doesn't actually happen that way in a classroom, but on a videotape you can actually see it happen.

They expressed mistrust of a written case as being contrived. Although it would be easy to contrive a video case, we had used noncontrived, unrehearsed live action tapings of classroom interactions. Students believed the video cases to be more authentic than the written cases to which they had been exposed.

The Process

The original examination was given in a whole class setting, with the instructor replaying the video tape several times while students wrote. Some students felt rushed to complete the examination in this setting, others wanted to review segments more frequently, while still others needed less time and review. Thereafter, students took the examination individually. The Student Self Instruction Center housed in the university library provided multiple sites with video play back equipment. Although the sense of too little time was dealt with by making the examination an individual event, there were other process problems. For example, students identified as problematic the use of student workers to staff the student self-instruction center, their inability to answer questions about the testing procedure, and noise.

Many students commute to the campus of this mid-western university for coursework; some from locations of 75 miles or more. However, no student mentioned the commuting distance as a handicap regarding the final examination. The final examination was produced as a VHS video tape, although a number of plausible means exist for bringing it to students in remote locations; these vary from simply sending a copy of the video tape to the student to providing for distance education via a local communications network. Although complaints were expected regarding the actual manipulation of the video play back technology, there were none. Students remained positive in their evaluation of the video case final examination. Peggy declared:

> To see a teacher and to read the hypothetical situation is totally different. Even though I found the examination easy I think it assessed my ability to be a critical and analytical observer. It was better than a written test because I could see the nuances and the style and how the teacher looked, kind of facial expressions she made, her proximity to the class, who she was looking at when she was talking to somebody else. All those things kind of gave me a better perspective on what she was trying to communicate to the students, as opposed to something written that says "this teacher is doing this."

Even though it takes more of their time and energy, students reacted positively to being evaluated using a videotaped case. Candy believed that:

> [She] did pretty well on the videotapes so I must have picked up what they were wanting us to observe and look at, but it was different because we never had seen a high school art class before.

> We watch situations on a video disc or computer or whatever, and it's more the reflective type than the multiple choice, true/false kind of test. It's a little bit more difficult to prepare for I think, cause [sic] you're just not sure what directions things are going to go in. Whereas in the other types of tests, you know, you go chapter by chapter and memorize for the test.

Technical

The technical quality of the audio and video reproduction was problematic. Examples of audio difficulties included unclear sound, muffled pupils' comments, and background noise interference. Video quality was affected most by the amateur status of the individual using the equipment and the type of equipment available for taping. Students were interviewed regarding their views of the experiences. Although they mentioned deficiencies in the technical quality, they still exhibited strong support for the use of video cases as an assessment. A colleague described the lack of attention her students gave to technical aspects in this way, "Their need to know about the content was greater than their need for box office quality film production." In the words of Harry,

> You couldn't really hear what the students were saying, but then I could see the teacher and the expressions on everybody's faces. It was almost like some of the times I observed [in a live classroom.] When I sat in the back of the room sometimes I couldn't hear everything either. At least in the video I could see what was going on.

Many of these problems have been addressed by using better equipment, by becoming more skilled with the equipment, and by increasing attention to technical quality.

Financial and collegial support

The cost of developing video case examinations includes many obvious expenses such as hiring professional camera operators and technicians, providing for travel to sites for taping, and renting equipment. Less obvious expenses include buying quantities of blank video tapes of the appropriate size and length, repairing faulty equipment, and providing for unforeseen disruptions that affect travel (the transport vehicle will not run or is not available), taping (the wrong size tape, or no tape was taken along, or the main subject of taping is absent from school), editing, and other activities associated with production. As a resource, time, or more properly the lack of adequate time, greatly affects both the quality and quantity of the output.

One colleague interested in the form of the final examination required students from her section of the preservice field experience course to take the video examination in place of the paper and pencil examination used in all sections of the Introduction to Teaching course. After the students had completed their examinations, she interviewed them concerning their perceptions. Although her students had not participated in the interactive video sessions during the course, their responses were particularly positive about the form of the examination.

Challenges and Future Directions

Student responses to the video case as an assessment for an early field observation course indicated that they found the format congruent with the kinds of activities they were expected to engage in during the course. Some students found that the final examination served as both a teaching mechanism and an assessment. The technology for video tape

play back was so familiar to students that they did not have difficulties using it.

Rapid advances in both the development of new technologies and the expansion of the uses of present technologies make predictions of the future a generally risky business. Nevertheless, based on the student responses to video taped cases as a format for assessing their professional growth in an early field experience course, further development of this mode of assessment seems necessary. This will involve technological issues (see Pape & Hostetler, 1992) as well as problems from the perspective of learning.

With regard to written cases, Harrington (1991) points out that the developmental level of students and of faculty is a necessary consideration for implementing the case method. Yet, Shulman (1991, p. 257) argues that, "A beautiful feature of teaching cases is their capacity to be read in different ways by different readers". Other questions arise when considering using case methods for assessment; these include asking whose morals, ethics, and values will stand as the model for evaluating student responses when questions in the assessment move beyond simple description and analysis. How can educators be confident that the theoretical, methodological, and normative issues raised by Harrington (1991) are addressed? Kagan and Tippins (1991), Pape and Kelley (1991), and other current research indicates that it is not plausible to expect high levels of responses from preservice students. These studies suggest that higher level responses are based on experience and developmental levels. The effective use of the video case as a means of authentic assessment will require open mindedness, appreciation of other perspectives, and recognition of the complexity of control over the learning process.

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